

9/910,848

Refine Search

Search Results -

Terms	Documents
L27 and (class\$ or categor\$) and dictionary\$ and (match\$ or pattern\$)	7

Database:

US Pre-Grant Publication Full-Text Database
 US Patents Full-Text Database
 US OCR Full-Text Database
 EPO Abstracts Database
 JPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Search:

L33

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Friday, July 29, 2005 [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
side by side			
<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L33</u>	L27 and (class\$ or categor\$) and dictionary\$ and (match\$ or pattern\$)	7	<u>L33</u>
<u>L32</u>	L27 and (class\$ or categor\$) and catalog\$ and dictionary\$ and (match\$ or pattern\$)	0	<u>L32</u>
<u>L31</u>	L27 and (class\$ or categor\$) and (hierarch\$ or tree\$) and catalog\$ and dictionary\$ and (match\$ or pattern\$)	0	<u>L31</u>
<u>L30</u>	L27 and (class\$ or categor\$) and (hierarch\$ or tree\$) and catalog\$ and dictionary\$ and (tree\$ or hierarch\$)	0	<u>L30</u>
<u>L29</u>	L27 and (class\$ or categor\$) and (hierarch\$ or tree\$) and catalog\$ and dictionary\$.clm. and (tree\$ or hierarch\$)	0	<u>L29</u>
<u>L28</u>	L27 and class\$ and categor\$ and (hierarch\$ or tree\$) and catalog\$ and dictionary\$.clm. and (tree\$ or hierarch\$)	0	<u>L28</u>
<u>L27</u>	L19 and l20	16	<u>L27</u>
<u>L26</u>	L25 and dictionary\$	0	<u>L26</u>

<u>L25</u>	L19 and l20 and l21	1	<u>L25</u>
<u>L24</u>	L22 and class\$ and categor\$ and (hierarch\$ or tree\$) and catalog\$ and dictionar\$.clm. and (tree\$ or hierarch\$)	11	<u>L24</u>
<u>L23</u>	L22 and class\$ and categor\$ and (hierarch\$ or tree\$) and catalog\$ and dictionar\$ and (tree\$ or hierarch\$)	102	<u>L23</u>
<u>L22</u>	l19 or l20 or L21	10274	<u>L22</u>
<u>L21</u>	705/26,27.ccls.	4722	<u>L21</u>
<u>L20</u>	715/532.ccls.	224	<u>L20</u>
<u>L19</u>	707/1,6.ccls.	5389	<u>L19</u>
<u>L18</u>	L17 and l12	5	<u>L18</u>
<u>L17</u>	l16 or l15	24	<u>L17</u>
<u>L16</u>	(5051898 4688195 5101491 5371895 6169986 6154213 5323452 4910691 6233575 6199099 6112181 4868770 5212771 5331556 4656603 5068812 4953080 4864497 4965742)! [PN]	19	<u>L16</u>
<u>L15</u>	('20030221171' '20040205671' '6134304' '20030113017' '6647383') [PN]	5	<u>L15</u>
<u>L14</u>	('20030221171' '20040205671' '5553127' '6647383') [URPN]	16	<u>L14</u>
<u>L13</u>	L12 not l6	8	<u>L13</u>
<u>L12</u>	L11 and class\$ and categor\$ and (hierarch\$ or tree\$)	8	<u>L12</u>
<u>L11</u>	L10 and catalog\$	27	<u>L11</u>
<u>L10</u>	L2 and (dictionary).clm.	27	<u>L10</u>
<u>L9</u>	L1 and (componet\$ with class\$)	1	<u>L9</u>
<u>L8</u>	L2 and (suppl\$ with dictionary).clm.	6	<u>L8</u>
<u>L7</u>	L4 and licens\$	2	<u>L7</u>
<u>L6</u>	L4 and (level\$ same conform\$)	0	<u>L6</u>
<u>L5</u>	L4 and (level\$ with conform\$)	0	<u>L5</u>
<u>L4</u>	L3 and class\$ and categor\$ and (hierarch\$ or tree\$)	29	<u>L4</u>
<u>L3</u>	L2 and (internet or online or network\$)	73	<u>L3</u>
<u>L2</u>	L1 and catalog\$	85	<u>L2</u>
<u>L1</u>	suppl\$ with dictionary	921	<u>L1</u>

END OF SEARCH HISTORY

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Generate Collection

Print

L13: Entry 5 of 8

File: USPT

Nov 11, 2003

DOCUMENT-IDENTIFIER: US 6647383 B1

TITLE: System and method for providing interactive dialogue and iterative search functions to find information

Brief Summary Text (5):

A problem with the currently available search engines is that they fail to provide effective results for many search problems. The failures fall into a number of categories including, but not limited to, 1) formulating a query, 2) adequately displaying, manipulating and navigating through results, 3) determining for what the user is actually looking, and 4) remembering how to locate the results again. From the point of view of web site owners, search engines have another set of shortcomings including, but not limited to 1) failure of metatags to provide sufficient information for an intelligent search approach, 2) failure of key words to formulate an intelligent search, and 3) the inherent requirement that web site owners maintain a large number of tags in inventory because of the ambiguity of language. Additionally, there exist some technical entities that can be improved upon in the course of a search. For example, it would be advantageous if redundant results could be eliminated, dead ends could be eliminated, and sources could be evaluated, tagged and screened. It would also be advantageous to provide search functions that correspond with known communities of users (or websites, etc.).

Brief Summary Text (7):

Web search engines do not provide user access to restructure aspects of the search from a graphical user interface. When a search is conducted and results are displayed, the decisions of the search engine are not displayed such that the user can manipulate the branches and navigate down the decision and results tree, changing the attributes and thereby finding slightly different results. The user is not provided with any information on what the extent of the results may be. The user is not afforded any opportunity to reconfigure the search or the results to display the relationship among the items returned.

Brief Summary Text (25):

Another advantage of the present invention is the determining of COI categories in fine granularity, representing COI categories and representing them differently for different COI's, representing relationships among COI categories and identifying an individual and the COI or COI's to which he or she belongs.

Detailed Description Text (25):

That is, when text is input on a form, or in a search input field, it can be sent to the search engine. If there are thousands of results, and the search server determines that the data returned are spread over a number of subjects, sources, etc., than the word or phrase typed into the input field of the search can be checked to see if it has multiple meanings, has special meanings in a dictionary of special word usage associated with a specialty or COI, or if the catalogue of expert knowledge has the word or phrase catalogued. The record in the COI or expert database could be used to select likely elements that would be of interest to the user.

Detailed Description Text (31):

Back-end 20 includes a front-end interface 28 for communicating search information

to and from front-end 18. A Smart Search engine 30 is provided that comprises functions, policies, and retrieval capability for identifying, locating and retrieving elements across a network of servers, as will be appreciated by those skilled in the art. Also provided are a DB (database) retrieval/searching component 32 for requesting DB information, a DB engine 34 for performing all physical DB retrieval and update functions, a DB administration component 36 for performing DB administration functions requested by administrator 38, a web crawler 40 which scans the internet 16 searching for information to store and index in Information Database 42, and a DB build/update component 44 that receives information from web crawler 40 and, in turn, uses DB engine 34 to build and update database 42. Other components, optionally used by Smart Search engine 30, are Lexical Dictionary 46, Expert Knowledge Database 48, Personality Profile Catalogue 50 and source profile catalogue 52. A data mining engine 54 is provided for building and maintaining information stores in relevant databases. A learning engine 56 is provided for building and maintaining the Expert Knowledge Database 48, the Personality Profile Catalogue 50 and a Display Techniques Database 58. Provisioning applications 60 are provided for provisioning users and relevant databases. A Community of Interest (COI) database 62 is provided for matching and assignment to user 12. More detailed functionality of Smart Search system 10 is provided in the following description.

Detailed Description Text (37):

With reference to FIG. 4, page-by-page GUI sequence generator 24 also includes an iterative process 130 to disambiguate words. As shown, a word or phrase is supplied from user 12 at entry point 132 or from a completed spell check operation 100 at entry point 134 and process 136 determines if the word has multiple definitions in the dictionaries 46. Process 136 will perform a standard dictionary lookup 138 to find alternate definitions 1 (140) and 2 (142). A user prompt 144 is provided to user 12 to request whether definition 1, 2, other (not specified) or other (specified) should be selected. If definition 1 or definition 2 is selected, processing continues at 146. If other (not specified) is selected, a determination is made on whether it is a new word at 148, and the system is taught about the new word at 150 before continuing. If other (specified) is selected, the search is conducted using records from searches conducted by other members of the COI at 152 as described, for example, in the Shriver and Small method described above, the patent application for which is incorporated herein by reference. Process 136 will also check, at node 154, profile catalogue 50 for a COI to which user 12 belongs. Process 156 checks the word or phrase in dictionaries and databases corresponding with selected COIs. From the results of process 156, process 158 returns alternate definition 3 for search purposes along with a database entry of known features corresponding to definition 3. Process 152 then conducts a search using alternate definition 3.

Detailed Description Text (38):

As shown in FIG. 5, page-by-page GUI sequence generator 24 further includes a process 170 for handling cases wherein a search has returned a large number of elements, or rather a number exceeding a preset threshold. Data classification engine 54, in backend 20, is invoked to analyze the data as a first step 172. This will attempt to place elements into feature clusters or groups. This process can involve accessing information about the elements derived from previous searches by all users, searches by users in the same COI, and any of the databases mentioned in this patent. A simple example might entail a broad clustering of the domains from which each element was drawn based on access patterns by members of different COI's. To minimize the amount of computation necessary per search session, the Data classification engine is expected to perform some or all of its learning functions offline.

Detailed Description Text (39):

After the Data classification engine has analyzed the data, a decision 174 is made to determine whether there is a minimal number of groups or not. If the number is minimal, processing continues at node 176 and data is displayed by display function

178. The data can be displayed as a view of all high-level data 180, or alternately, a check 182 of the user profile can be performed (in Profile Catalog 50), to determine how, at step 184, to display the data. For example, the display might comprise a table with rows and columns determined by data features. The information derived by the Data classification engine will also help inform the display process.

Detailed Description Text (40):

If the number of groups is not minimal, it can be large. If so, processing continues at node 186. A database check 188 is performed on the Source Characterization Database 52 and the Expert Knowledge Database 48, looking for the groups that are important. If a group is interesting to a single COI, processing continues at node 190, and a view function 192 shows all data with features preferred by the COI based on references to Profile Catalogue 50, Source Characterization Database 52, and Knowledge Database 48.

Detailed Description Text (48):

Guide to experts--The user interface provides a means to pull up a listing of members of each Community of Interest. Users identify when they want their identity to remain secured. Otherwise, members of the user group can seek the names of people or organizations having the same interests or expertise they need. The Personality Profile Catalogue 50 is used to create the listing of experts and interested persons.

Detailed Description Text (51):

Data display function--The data display application uses the Personality Profile Catalogue 50 to identify the user's COI. There is a corresponding generic profile of Display types in the Display Techniques Database 58. These profiles of display techniques are available to be used when little is known about the preferences of the user. If the user is continually presented with a type of display and chooses another one from the toolbar into which the resulting elements may be transferred, then the profile is updated to reflect the preference. As the population of users in the same COI continue to use the display functions, the system will learn more about the group as a population and will ultimately learn how to create a better Display Techniques Database entry for that COI. There may be refined differentiation among user groups observed in this manner and the databases will ultimately contain many more finely differentiated databases of Personality Profiles and Display Technique preferences.

Detailed Description Text (53):

"Tell me more about this" function--Once search results have been returned, the application has more data about the search and its resulting elements. It knows what the sources are, etc. The user may wish to learn more about things the way they can in the library. Once a person gets to a bookshelf or magazine rack in a library, many items related to the original search are present. These items may not have been explicitly listed in the search results but they are of potential interest to the user. The graphical user interface permits the user to continue a search by selecting one branch of the search and continuing in a more refined manner into the data that are related to the original search. Convenient methods of performing this function include using the Source Characterization Database 52 to categorize the results and preferably provide a link to results titled "Would you like more magazine articles about pedigreed cats?" The user could then access the information if desired. The Community of Interest is also used to prioritize the questions asked of the user. The Expert Knowledge Database 48 maintains and updates the query formulation function.

Detailed Description Text (56):

Community of Interest database 62 contains provisioned and learned information about COIs. It contains histories of searches conducted by members of COIs. Provisioned data includes pre-populated information including catalogues of known

professions, hobbies, demographic groups, etc. It contains references to lexical dictionaries, sources preferred, user profiles, display techniques, etc. It also contains references to Source Characterization Databases.

Detailed Description Text (58):

To effectively provide service to new users, and those identified for the first time with a COI, a pre-populated global description can be used. Library lists and Indexes of Job Classifications may be used to begin the database. This will assist in filling in the spaces of COI's. Looking at the sources available online and the descriptions of the target audiences will also provide a piece of the COI database.

Detailed Description Text (59):

Once users of the system collect around each COI, the basic database representations may be modified to reflect the measurable requirements of the actual members of the group. The database will contain job categories, population categories, demographic information, population segmentations, memberships of known organizations and groups, hobbies and interests categories, etc.

Detailed Description Text (64):

Personality Profile Catalogue

Detailed Description Text (65):

With reference back to FIG. 1, Personality Profile Catalogue 50, besides containing profiles unique to individuals, contains personality profiles for celebrities and generic profiles for miscellaneous use or, perhaps, for use as templates for defining initial individual profiles. It should be noted that Personality Profile Catalogue 50 and other databases are not limited to the above-mentioned exemplary personality profiles.

Detailed Description Text (66):

Creating a COI profile in profile catalogue 50 for a user with or without registration by user would be done by: assessing technical papers, web site, email, subscriptions (including source characteristics), mail lists to and from, items forwarded, organization charts, directory entries, query entries of the individual user 12 to determine special interests and clustering of features in the elements identified (a selection of these and other items can be assessed depending on access provided through group service arrangement, or individual subscription); borrowing a personality from a generic group similar to the individual then making changes as more information becomes available; assessing selected items in search results relating to an area of interest to determine characteristics and associating them with the user's profile; determining an age or social context of the individual; determining groups and individuals associated with the individual by reviewing email, technical papers, telephone and email address book, post, articles containing individual's name or member of group, etc.; determining an individual user's relationship to the group: casual, involved, etc.; recording multiple COI's of the individual using the system; determining attributes relating to understanding and use of language including but not limited to: primary language used, other languages used, competence and performance in each; and, determining attributes of language for each COI including but not limited to: access to vocabulary of each specialty, estimated sophistication in subject or area of interest, facility with vocabulary in specialty (competence and performance).

Detailed Description Text (67):

In addition, preferably there exists a database of catalogues of sources used in research, in a library, for market research, etc. The items in the catalogues, (books, journals, etc.) have known target audiences, and actual audiences. The audiences can change over time, and that is something we can observe by looking at the users selections online and updating the database. Over time there will be more fine granularity in the specialization of the sources. (Perhaps because online,

magazines and journals may not be tracked in their entirety, but may be counted by the individual articles, ads, etc.) There are temporal facts about elements, people, etc. that will make one item more desirable than another. For example, a research cardiologist might only be interested in items that are published within the past two years. When looking for a conference, he or she is only interested in conference listings that are recent, and that will occur at least one month in the future (for planning purposes). A student 8.sup.th grader may not be that sensitive to the calendar items. There is a different calendar that's important to a student. School year, holidays, time of day, etc. There may be some reason to select information or display information based upon the calendar people live by.

Detailed Description Text (68):

As such, creating a proxy profile in profile catalogue 50 for a COI would be done by: identifying sources that fit the COI (an additional tier of sources should exist to provide flexibility); and, identifying a calendar for relevant items that best fits the COI (a secondary calendar should exist).

Detailed Description Text (69):

FIG. 10 provides a flow chart of a Profile Provisioning for Search Function 280. A test 282 is first performed to determine if the user is known. In case test 282 returns a yes answer, yes path 284 is invoked where test 286 determines how the user is known. Possible answers to test 286 are, for example, a company database, a social group/organization database, public database/directory, school government database, found online (email, web site, document, papers, etc.), other private, other public, and has profile. Once it is determined how the user is known, processing continues at node 288 to populate profile catalogue 50.

Detailed Description Text (70):

Returning to test 282, if a no answer is returned, no path 290 is invoked where function 292 offers the user the following profile options: provide profile information, select a generic profile, select a celebrity profile, or bypass the profile option. If any choice other than the bypass option is returned by the user at 294, processing continues at node 288 to populate profile catalogue 50. Bypass path 296 is invoked if the user chooses to bypass the profile option, where collection function 298 gathers keyboard/user interface entries and items selected from a results listing. Compare function 300 compares the items gathered by the previous collection function with known COIs. Select function 302 then selects the closest COI for addition to profile catalogue 50.

Detailed Description Text (71):

Once it is determined that Personality Profile Catalogue 50 needs to be populated or updated from the above-described procedures, the task is reduced to determining what to put into Personality Profile Catalogue 50. FIG. 11 shows a flow chart for a portion of process 310 to make this determination, and this determination is made depending on the source of information. Process 312 handles the case where the source is a social group/organization database.

Detailed Description Text (72):

Catalogue function 314 catalogues the social group, relationships and organization into profile database 50. Identify function 316 identifies the COI of the group including subcategories for populating profile database 50. Scan function 318 scans documents, web sites, etc. for words and terms to populate profile database 50. Scan function 320 scans email for subjects, senders, etc. to populate profile database 50. Scan function 322 scans and processes text files to create a group profile. It creates a lexicon of terms used by the group or correlates the lexicon from known sources such as organization/subject dictionaries. Create function 324 creates a geographic representation of the organization/group, locations of people, etc. to populate profile database 50.

Detailed Description Text (73):

FIG. 12 shows a flow chart for process 330 which handles the case where the source is found online based on the user's ID or name. Decision function 332 determines whether the source is a personal web site, directory, document, etc. If the source is a personal web site, scan function 334 scans the web site for clusters of terms used. Correlation function 336 correlates the clusters with one or more COIs. Matching function 338 chooses the best fit COIs, and populate function 340 populates profile catalogue 50 with a template of that COI or COIs. If decision function 332 determines that the source is an online directory, scan function 342 scans the directory for features, geography, organization charts, etc. Select function 344 selects a path to a generic profile with identifying data and geography or communication, if known. If decision function 332 determines that the source is an online document, scan function 346 scans the document and determines if an author is known. If an author is known, path 348 is traversed, and weight function 350 weighs the document high because the author is known. Check function 352 attempts to determine the publisher source, and matching function 354 determines a best fit COI. If the author is unknown, however, content match function 356 is invoked, and check function 358 searches for word clusters of interest.

Detailed Description Text (76):

FIG. 15 shows a flow chart for the final process 380, of determination process 310, which handles the case where the source is a company database. Function 382 references organization charts, relationships and departments. Function 384 determines a job title, and if a COI matches the title directly, populates profile catalogue 50 with the COI. Function 386 references the job description, and performs cross-referencing of intelligent databases, and catalogues information if necessary for populating profile catalogue 50. Function 388 references any referenced web sites and scans those web sites for clustering categories and clusters of text contents for determining COIs. Function 390 references emails and handles these with appropriate scanning functions, scanning for content, senders information and subjects. Function 392 references documents databases and scans for features and clusters within those databases. Function 394 references communications links such as, for example, email, phone, fax, to determine features and clusters for correlating to COIs. And finally, function 396 references geographic locations for home, office, etc. for populating profile catalogue 50.

Detailed Description Text (78):

Source Characterization Database 52 contains catalogues of sources, target audiences, demographics, publishers, useful features, cross references, COI references, provisioned and learned, market research, dates, frequencies of updates and types of source (electronic, broadcast, video, personal web site, etc.).

Detailed Description Text (79):

Creating a proxy source catalogue in characteristics catalogue 52 would be done by: identifying known subject matter sources including but not limited to journals, newspapers, magazines, web sites, brick and mortar sources, paper published sources, etc.; and, populating the catalogue 52 with descriptions, links, profile of language, type of data available in each source, availability online.

Detailed Description Text (80):

Thus, resources on the network of networks can be catalogued by labeling each known resource (journals, periodicals, publications, organizational publications, professional publications, newspapers, personal sites, business sites, catalogues, library resources, market research, etc.), identifying COI's interested in each known resource, correlating vocabulary used in known resources with COI, and periodically checking the vocabulary and update it with new buzz words, jargon, etc.

Detailed Description Text (93):

The personality profile catalogue or database 50, as noted above, is a database

that can identify characteristics of the user that will assist in formulating a query, determining which items in a list the user may be interested in, selecting a display technique, determining which sources to prioritize, etc. Problems faced in using the strategy of COI for search include being able to identify the COI of the user without collecting specific information from the user. The system can store a series of default profiles, then observe user behavior, query user preferences, and modify the profile for future searches.

Detailed Description Text (101):

Writing style in the sources selected by user 12 or by an expert will be used to identify characteristics of the COI. These characteristics will be catalogued by Smart Search system 10. Writing style of the user 12 will be characterized and stored in a personality profile 50 database.

Detailed Description Text (103):

Search results sources will be catalogued to identify characteristics of the sources including but not limited to: dates and frequency, COI, COI's, general level, degree and level of jargon, categories of resources (calendars of events, classified, technology reviews, etc.) and will be used to inform user about sources. The source characteristics catalogue 52 will record whether the source is a primary source, secondary source, web site, commercial publication, technical, business, fiction, or other type of source. Experts will annotate the source. Source participants can add information to the record about the source.

Detailed Description Text (104):

One method of presenting results is to list categories in a series of nested menu windows based upon the data returned and how it clusters in categories, and metacategories. Category names can be derived from the data and then recorded for future use by the Smart Search system 10 application. Categories can also be derived from the data with the supervision of an expert resource person, or subject matter expert. Category differentiation is based upon fine-grained understanding and differentiation among terms, phrases, reserved words, jargon, technical terms, sources selected, and resulting elements.

Detailed Description Text (105):

The complete results presentation will contain representations of each distinct concept represented in the results and not constrained by COI, and a reference to each data point in each concept representation. Since many elements in a search result list belong to more than one category or abstract concept, the relationship among categories will be presented.

Detailed Description Text (107):

When sources are identified by the Smart Search system 10 application, annotation from the cataloguing process will be made available. The annotation will inform the user 12 about the source and about who created it and who (COI) uses the source. This information may be provided by the source owner, an expert, or automatically determined. For certain applications Smart Search system 10 will also link to the main information center for the source identified.

Detailed Description Text (115):

Another means for altering the direction of the search application is to add clarification by looking at the data represented in the results. By selecting other features of the data to display relationships not clearly illustrated in the first display of the data, a search result may reveal new information to the user. The results data is representing the view from a particular point of view or COI. The user is not limited to this presentation of the data. Other features identified in the search are available and may be selected from a window, or by another means of manipulating the data of the results. A helpful device would be a window that lists all the recognized significant data relationships in the search results. For example, if 20% of the search results were from technical journals, and 15% of the

search results were from items dating within the past ten years, those facts would be listed in the window for the user to see. The data itself reveals this information, using the database stored in the search application server to verify sources, publication dates, subjects and relevance, etc. Attributes about the users of the source are also relevant to the COI. If a description of the users of a source is made available, then the COI can be matched more directly with the targeted market of the sources. Even if the results are displayed by categories assumed to be important to the COI, there may be a feature in the data that is of interest to the user and is not graphically represented. By using a method such as the window mentioned above, a user may identify a feature that is of interest, and request that the display be modified to illustrate that feature.

Detailed Description Text (116):

Example: Theater Directions Magazine Monthly 20,000 Circulation US Published in English Specialized periodical for Theater professionals Ages of readers Demographics of readers Additional information about readers 35 Articles monthly Information about Authors 200 Advertisers Information about advertisers Personals Classifieds Etc.

Detailed Description Text (118):

Search Application: Prefers Theater Directions Magazine as a source for search conducted by a member of the Thespian COI. A search may result in a listing of results spanning 3 major unrelated COI's. For example, a search on Home Networking may result in thousands of items in a list spanning many pages of titles. When looking at the results, they may fall into the categories of: home communications network architectures including such subjects as computer LAN's, etc., home health aides visiting the ill or elderly, and home school programs using a network of teachers and other resources. By using the strategy associated with Communities of Interest, the system would identify which major subject area was related to a particular COI through: knowledge of the sources of materials, subject handled by the source, types of authors, types of content, disambiguating words used for the search and filtering for features related to the COI, etc. Without specific knowledge of the COI, the total of the search results would be segregated based upon strata and subject as defined in the global COI database. The results would then be displayed showing the features that differentiate them, in this case being home electronics/communications, social work, education, and other.

Detailed Description Text (121):

Humans are particularly good at identifying patterns in data when the data is presented in an appropriate graphical form. The key is to identify reasonable graphical representations for abstract data elements. It is another object of the present invention to identify subject matter and object classifications that will be modeled graphically so search results may be presented to the user 12. An example for representing solutions graphically would involve using a metaphor for placing pushpins representing search returned objects at a high level and with relationships described graphically (between the returned objects). Color can be used to indicate proximity characteristics. Sound can be used to illustrate relationships among items, and to represent navigational distances between objects. Sounds can enhance an application so audio-based interfaces may be used in addition to graphical. For example, a search might be conducted using a cell phone, and the user 12 will listen to results receiving audio cues to help formulate relationships among returned items. For example, suppose a consumer is searching for a particular car. The consumer knows some attributes relating to the car, such as the manufacturer and the year. The Smart Search will enable the consumer user 12 to use a configuration management approach to filling in a form through which the search will be formulated. The assumption here is that the consumer's shopping interests can vary along a continuum from a very directed search through to a rather unconstrained browsing type of search. An important issue relating to these dimensions of searching is the ability for a search engine to have varying degrees of information presented during the query and still return useful, targeted, and

understandable results.

CLAIMS:

2. The method as set forth in claim 1 further comprising: representing interest categories and representing each differently for different interests; representing relationships among the categories; and, identifying an individual and the interest categories to which he or she belongs.

4. The method as set forth in claim 1 further comprising creating, updating and accessing personality profile records in a personality profile catalogue.

10. The method as set forth in claim 1 further comprising iterating using configurable query techniques, using a lexical dictionary for disambiguation of query text.

12. The system as set forth in claim 11 further comprising at least one database for storing information representing interest categories, representing relationships among the categories and identifying an individual and the interest categories to which he or she belongs.

14. The system as set forth in claim 11 further comprising a personality profile catalogue.

17. The system as set forth in claim 11 further comprising a Community of Interest Database for storing the interest categories.

20. The system as set forth in claim 11 wherein the interface facilitates communication of configurable query techniques, using a lexical dictionary for disambiguation of query text.

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Search Results - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 20040205671 A1

L8: Entry 1 of 6

File: PGPB

Oct 14, 2004

PGPUB-DOCUMENT-NUMBER: 20040205671

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040205671 A1

TITLE: Natural-language processing system

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

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Sukehiro, Tatsuya	Osaka		JP	
Torigoe, Shin	Osaka		JP	
Kawakita, Yasuhiro	Osaka		JP	
Nakagawa, Satoshi	Hyoga		JP	
Matsunaga, Toshihiko	Osaka		JP	

US-CL-CURRENT: 715/532; 715/536

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 2. Document ID: US 20020013741 A1

L8: Entry 2 of 6

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020013741

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020013741 A1

TITLE: Method and apparatus for accepting and processing an application for conformity of a user dictionary to a standard dictionary

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Ito, Satoshi	Tokyo		JP	

US-CL-CURRENT: 705/26

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC	Draw. De
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☐ 3. Document ID: US 6598002 B1

L8: Entry 3 of 6

File: USPT

Jul 22, 2003

US-PAT-NO: 6598002

DOCUMENT-IDENTIFIER: US 6598002 B1

TITLE: Method and device for testing electronic equipment

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw. De
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☐ 4. Document ID: US 6415295 B1

L8: Entry 4 of 6

File: USPT

Jul 2, 2002

US-PAT-NO: 6415295

DOCUMENT-IDENTIFIER: US 6415295 B1

TITLE: Storing personal medical information

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw. De
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☐ 5. Document ID: US 6094649 A

L8: Entry 5 of 6

File: USPT

Jul 25, 2000

US-PAT-NO: 6094649

DOCUMENT-IDENTIFIER: US 6094649 A

TITLE: Keyword searches of structured databases

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw. De
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☐ 6. Document ID: US 5185887 A

L8: Entry 6 of 6

File: USPT

Feb 9, 1993

US-PAT-NO: 5185887

DOCUMENT-IDENTIFIER: US 5185887 A

TITLE: Database generation management method and system

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw. De
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Terms	Documents
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Bkwd Refs

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Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: US 20040205671 A1

L13: Entry 1 of 8

File: PGPB

Oct 14, 2004

PGPUB-DOCUMENT-NUMBER: 20040205671

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040205671 A1

TITLE: Natural-language processing system

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sukehiro, Tatsuya	Osaka		JP	
Torigoe, Shin	Osaka		JP	
Kawakita, Yasuhiro	Osaka		JP	
Nakagawa, Satoshi	Hyoga		JP	
Matsunaga, Toshihiko	Osaka		JP	

US-CL-CURRENT: 715/532; 715/536

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Ds
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☐ 2. Document ID: US 20030221171 A1

L13: Entry 2 of 8

File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030221171

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030221171 A1

TITLE: Data dictionary method

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rust, Godfrey	London		GB	
Bide, Mark	Frimley Green		GB	
Lindek, Steffen	Plankstadt		DE	
Barlas, Chris	London		GB	

US-CL-CURRENT: 715/532

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 3. Document ID: US 20030113017 A1

L13: Entry 3 of 8

File: PGPB

Jun 19, 2003

PGPUB-DOCUMENT-NUMBER: 20030113017

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030113017 A1

TITLE: Process for the automatic creation of a database of images accessible by semantic features

PUBLICATION-DATE: June 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Thomas, Corinne	Chaumont		FR	
Essafi, Hassane	Orsay		FR	

US-CL-CURRENT: 382/181; 382/173

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 4. Document ID: US 20020139839 A1

L13: Entry 4 of 8

File: PGPB

Oct 3, 2002

PGPUB-DOCUMENT-NUMBER: 20020139839

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020139839 A1

TITLE: MACHINE READABLE LABEL READER SYSTEM WITH VERSATILE RESPONSE SELECTION

PUBLICATION-DATE: October 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Catan, Carolyn Ramsey	Pleasantville	NY	US	

US-CL-CURRENT: 235/375

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw D
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☐ 5. Document ID: US 6647383 B1

L13: Entry 5 of 8

File: USPT

Nov 11, 2003

US-PAT-NO: 6647383

DOCUMENT-IDENTIFIER: US 6647383 B1

TITLE: System and method for providing interactive dialogue and iterative search functions to find information

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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☐ 6. Document ID: US 6491217 B2

L13: Entry 6 of 8

File: USPT

Dec 10, 2002

US-PAT-NO: 6491217

DOCUMENT-IDENTIFIER: US 6491217 B2

TITLE: Machine readable label reader system with versatile response selection

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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☐ 7. Document ID: US 6134304 A

L13: Entry 7 of 8

File: USPT

Oct 17, 2000

US-PAT-NO: 6134304

DOCUMENT-IDENTIFIER: US 6134304 A

**** See image for Certificate of Correction ****

TITLE: General analysis system

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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☐ 8. Document ID: US 5553127 A

L13: Entry 8 of 8

File: USPT

Sep 3, 1996

US-PAT-NO: 5553127

DOCUMENT-IDENTIFIER: US 5553127 A

TITLE: System and method for processing and analyzing telephone calls in a telephone exchange

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWMC	Draw D
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Clear	Generate Collection	Print	Fwd Refs	Bkwd Refs	Generate OACS
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Terms	Documents
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Display Format: **Change Format**

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☐ [Generate Collection](#) [Print](#)

L25: Entry 1 of 1

File: USPT

Sep 18, 2001

US-PAT-NO: 6292796

DOCUMENT-IDENTIFIER: US 6292796 B1

TITLE: Method and apparatus for improving access to literature

DATE-ISSUED: September 18, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Drucker; Ernest	New York	NY		
Meyer; Jonathan D.	Mt. Vernon	NY		
McGinn; Thomas	New York	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Clinical Focus, Inc.	Mt. Vernon	NY			02

APPL-NO: 09/ 256966 [\[PALM\]](#)

DATE FILED: February 23, 1999

INT-CL: [07] [G06 F 17/30](#)

US-CL-ISSUED: 707/5; 707/2, 707/3, 707/6, 707/10, 707/102, 707/513, 707/532, 704/9, 705/27, 705/30, 709/218, 709/219

US-CL-CURRENT: [707/5](#); [704/9](#), [705/27](#), [705/30](#), [707/10](#), [707/102](#), [707/2](#), [707/3](#), [707/6](#), [709/218](#), [709/219](#), [715/513](#), [715/532](#)

FIELD-OF-SEARCH: 707/2, 707/3, 707/10, 707/102, 707/5, 707/6, 707/513, 707/532, 707/1, 707/9, 705/27, 705/30, 704/9, 709/218, 709/219, 709/226, 709/227

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5355497	October 1994	Cohen-Levy	707/200
<input type="checkbox"/> 5404514	April 1995	Kageneck et al.	707/5
<input type="checkbox"/> 5495600	February 1996	Terry et al.	707/3
<input type="checkbox"/> 5694592	December 1997	Driscoll	707/3

<input type="checkbox"/>	<u>5873076</u>	February 1999	Barr et al.	707/3
<input type="checkbox"/>	<u>5893092</u>	April 1999	Driscoll	707/5
<input type="checkbox"/>	<u>5911139</u>	June 1999	Jain et al.	707/3
<input type="checkbox"/>	<u>5913205</u>	June 1999	Jain et al.	707/2
<input type="checkbox"/>	<u>5926812</u>	July 1999	Hilsenrath et al.	707/5
<input type="checkbox"/>	<u>5963940</u>	October 1999	Liddy et al.	707/5
<input type="checkbox"/>	<u>5974412</u>	October 1999	Hazlehurst et al.	707/3
<input type="checkbox"/>	<u>5987457</u>	November 1999	Ballard	707/5
<input type="checkbox"/>	<u>6006225</u>	December 1999	Bowman et al.	707/5
<input type="checkbox"/>	<u>6029161</u>	February 2000	Lang et al.	707/1
<input type="checkbox"/>	<u>6029165</u>	February 2000	Gable	707/3
<input type="checkbox"/>	<u>6067552</u>	May 2000	Yu	707/501
<input type="checkbox"/>	<u>6101537</u>	August 2000	Edelstein et al.	709/219

OTHER PUBLICATIONS

Schreiber F A et al: "Dynamic User Profiles and Flexible Queries in Office Document Retrieval Systems" Decision Support Systems, NL, Elsevier Science Publishers, Amsterdam, vol. 5, No. 1, Jan. 1, 1989 (1989-01-01), pp. 13-28, XP000569991 ISSN: 0167-9236 p. 13, left-hand column, line 1--p. 16, right-hand column, line 50; figures 1,2.

Pazzani M et al: "Learning From Hotlists and Coldlists: Towards a WWW Information Filtering and Seeking Agent" Proceedings, International Conference on Tools with Artificial Intelligence, US, Los Alamitos, CA., Jan. 1, 1995 (1995-01-01), pp. 492-495, XP000567438, p. 492, left-hand column, line 1-p. 493, right-hand column, line 13; figure 1.

Morita M et al: "Information Filtering Based on User Behavior Analysis and Best Match Text Retrieval" Proceedings of the Annual International ACM-SIGIR Conference on Research and Development in Information Retrieval, DE, Berlin, Springer, vol. CONF. 17, 1994, pp. 272-281, XP000475327, p. 272, line 1 -page 274, line 50; figure 1.

Database Inspec Online! Institution of Electrical Engineers, Stevenage, GB; Inspec No. AN26754, XP002140862 abstract & Barkla J.K.: "The University of Sheffield Biomedical Information Project" Information Scientist, vol. 3, No. 1, Mar. 1969 (1969-03), pp. 13-27, UK.

Binkley J et al: "Rama: An Architecture for Internet Information Filtering" Journal of Intelligent Information Systems: Artificial Intelligence and Database Technologies, NL, Kluwer Academic Publishers, Amsterdam, vol. 5, No. 2, Sep. 1, 1995 (1995-09-01), pp. 81-99, XP00061768 ISSN: 0925-9902 p. 81, line 1 -p. 83, line 16.

DIALOG Pocket Guide, 1995 Knight-Ridder Information, Inc., 2440 El Camino Real, Mount View, California 94040, Registered U.S. Patent and Trademark Office #067012, Oct. 1995.*

Ball et al., "An Internet Difference Engine and its applications," AT &T Bell Labs., NJ., Technologies for the Information Superhighway Digest of papers Compcon 1996, ISBN: 0-8186-7414-8, Feb. 25-28, 1996, pp. 71-76.

ART-UNIT: 212

PRIMARY-EXAMINER: Alam; Hosain T.

ASSISTANT-EXAMINER: Alam; Shanid

ATTY-AGENT-FIRM: The Hecker Law Group

ABSTRACT:

A method and apparatus for improving access to literature is described. Embodiments of the invention comprise an access mechanism that searches current and past literature (e.g., journal publications or other articles) and selects some or all of the literature for a user based on criteria established for the user. In one embodiment of the invention, the access mechanism is coupled to an electronic medical records system used to enter patient information and user profile information and coupled to one or more literature (e.g., medical, scientific, current affairs, law, dental, etc.) libraries or database(s). Search criteria is obtained from user profile information established for a physician (or other user of the electronic medical records system) and patient information. The search criteria is used to generate a request for literature from the libraries. The search criteria may act as a filter of the literature that is contained in a library. In addition, the results of the request obtained from a library may be filtered based on criteria established for the user. The user may view, save, and/or print the results.

40 Claims, 16 Drawing figures

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L33: Entry 1 of 7

File: USPT

Dec 10, 2002

US-PAT-NO: 6493713

DOCUMENT-IDENTIFIER: US 6493713 B1

TITLE: Dictionary and index creating system and document retrieval system

DATE-ISSUED: December 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kanno; Yuji	Yokohama			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Matsushita Electric Industrial Co., Ltd.	Osaka			JP		03

APPL-NO: 09/ 580972 [PALM]

DATE FILED: May 30, 2000

PARENT-CASE:

This application is a Division of application Ser. No. 09/059,567, filed Apr. 14, 1998, now U.S. Pat. No. 6,169,999.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	9-156056	May 30, 1997

INT-CL: [07] G06 F 17/21

US-CL-ISSUED: 707/6; 707/532

US-CL-CURRENT: 707/6; 715/532

FIELD-OF-SEARCH: 707/530, 707/532, 707/3-4, 707/6, 707/100

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> <u>4358824</u>	November 1982	Glickman et al.	707/5
<input type="checkbox"/> <u>4991135</u>	February 1991	Yoshimura et al.	364/900
<input type="checkbox"/> <u>5123103</u>	June 1992	Ohtaki et al.	707/5

<input type="checkbox"/> 5375235	December 1994	Berry et al.	395/600
<input type="checkbox"/> 5479383	December 1995	Tsuneyoshi	369/14
<input type="checkbox"/> 5649221	July 1997	Crawford et al.	707/532
<input type="checkbox"/> 5655129	August 1997	Ito	395/760
<input type="checkbox"/> 5708829	January 1998	Kadashevich et al.	395/793
<input type="checkbox"/> 5761688	June 1998	Morishita	707/532
<input type="checkbox"/> 5774834	June 1998	Visser	704/10
<input type="checkbox"/> 5940836	August 1999	Fukushima	707/104
<input type="checkbox"/> 5959629	September 1999	Masui	345/347
<input type="checkbox"/> 5983171	November 1999	Yokoyama et al.	704/10
<input type="checkbox"/> 5995922	November 1999	Penteroudakis et al.	704/9

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
8249354	September 1996	JP	

OTHER PUBLICATIONS

"Information Retrieval", 1992, pp. 1-33, pp. 44-51, pp. 66-79, pp. 219-237.

"A Fast Full-Text Search Method for Japanese Text Database" by Kikuchi; The Transactions of the Institute of Electronics, Information and Communication Engineerings D-1, vol. J75-D-1, No. 9, Sep. 1992; pp. 836-846.

"Development of Full-Text Search System for Large Japanese Text Bases using n-gram Indexing Method--Incremental n-gram Indexing Method" by Sugaya; Information processing Society of Japan; The 53rd (latter period of 1996) National Meeting; pp. 3-235-3-238 (w/English abstract).

"Outline of the Flexible Character String Inversion Method (1) for High-speed Full-Text Search" by Fukushima; Information Processing Society of Japan; the 53rd (latter period of 1996) National Meeting; pp. 3-239-3-242 (w/English abstract).

ART-UNIT: 2176

PRIMARY-EXAMINER: Feild; Joseph H.

ATTY-AGENT-FIRM: Gopstein; Israel Clark & Brody

ABSTRACT:

A high-speed document retrieval system creates a regular expression dictionary and a word index on the basis of a retrieval document and a word dictionary to conduct retrieval to a document through the regular expression dictionary and the word index at a high speed. A regular expression dictionary expressing a set of character strings having the same length is created from a word dictionary. In terms of a character string included in a retrieval document and matching with a regular expression in the regular expression dictionary, an index element is recorded in a word index when there is no different index element which allows an observing index element to be deducible, which eventually produces a word index capable of achieving a high-speed full-text retrieval without the noticeable increase in the index capacity.

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L33: Entry 2 of 7

File: USPT

Apr 30, 2002

US-PAT-NO: 6381598

DOCUMENT-IDENTIFIER: US 6381598 B1

TITLE: System for providing cross-lingual information retrieval

DATE-ISSUED: April 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Williamowski; Jutta	Grenoble			FR
Borghoff; Uwe M.	Hoehenkirchen			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Xerox Corporation	Stamford	CT			02

APPL-NO: 09/ 218431 [\[PALM\]](#)

DATE FILED: December 22, 1998

INT-CL: [07] [G06 F 17/30](#), [G06 F 17/27](#), [G06 F 17/28](#)

US-CL-ISSUED: 707/5; 707/532, 707/1

US-CL-CURRENT: [707/5](#); [707/1](#), [715/532](#)

FIELD-OF-SEARCH: 704/8, 707/1, 707/103, 707/532, 707/5, 707/104.1, 707/3.5

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5426583	June 1995	Uribe-Echebarria Diaz De Mendibil	364/419.08
<input type="checkbox"/> 5450598	September 1995	Kaplan et al.	395/800
<input type="checkbox"/> 5564058	October 1996	Kaplan et al.	395/800
<input type="checkbox"/> 5581780	December 1996	Kaplan et al.	395/800
<input type="checkbox"/> 5594641	January 1997	Kaplan et al.	707/1
<input type="checkbox"/> 5613145	March 1997	Kaplan et al.	395/800
<input type="checkbox"/> 5642522	June 1997	Zaenen et al.	707/532
<input type="checkbox"/> 5805832	September 1998	Brown et al.	711/1

<input type="checkbox"/> 5953726	September 1999	Carter et al.	707/103
<input type="checkbox"/> 6092036	July 2000	Hamann	704/8

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 838 765	April 1998	EP	
WO 98/48359	October 1998	WO	
WO 98/48361	October 1998	WO	

OTHER PUBLICATIONS

Andreoli, J.M. et al., The Constraint-Based Knowledge Broker Model: Semantics, Implementation and Analysis, J. Symbolic Computation, (1996) 21, pp. 635-667.

Ballesteros, L. et al., Dictionary Methods for Cross-Lingual Information Retrieval, Lecture Notes in Computer Science, 1134, ISSN 0302-9743, pp. 791-801., 1996.

Rao, R. et al., System Components for Embedded Information Retrieval from Multiple Disparate Information Sources, Proceedings of 1993 ACM Symposium on User Interface Software and Technology, Atlanta, GA, Nov. 1993, ACM SIGGRAPH and SIGCHI.

European Search Report and Annex, Application No. EP 99 31 0220.

Hull, D. A., et al.: "Querying Across Languages: A Dictionary-Based Approach to Multilingual Information Retrieval", Proceedings of the Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, US, New York, NY: ACM, vol. CONF. 19, 1996, pp. 49-57, XP000788309 ISBN: 0-89791-792-8 * p. 50, left-hand column, line 26-p. 52, left-hand column, line 6*.

Ballesteros, L., et al. "Phrasal Translation and Query Expansion Techniques for Cross-Language Information Retrieval", Annual International ACM-SIGIR Conference on Research and Development in Information Retrieval, US, New York, NY: ACM, 1997, pp. 84-91, XP000782005 ISBN: 0-89791-836-3 * p. 84, right-hand column, line 22--p. 85, right-hand column, line 48*..

ART-UNIT: 2171

PRIMARY-EXAMINER: Metjahic; Safet

ASSISTANT-EXAMINER: Chen; Susan

ATTY-AGENT-FIRM: Domingo; Richard B.

ABSTRACT:

An information retrieval system providing for cross-lingual information retrieval. The method as implemented in the system causes elementary words to be extracted from a search expression. These elementary words are translated and stemmed into the target language(s). Searches are then made for documents containing combinations of the stemmed and translated elementary words. When documents are retrieved they are verified that they contain the same linguistic structure as the initial search expression. Documents that cannot be verified are eliminated from the set of search documents returned to the user.

13 Claims, 10 Drawing figures

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L33: Entry 3 of 7

File: USPT

Jul 3, 2001

US-PAT-NO: 6256630

DOCUMENT-IDENTIFIER: US 6256630 B1

TITLE: Word-containing database accessing system for responding to ambiguous queries, including a dictionary of database words, a dictionary searcher and a database searcher

DATE-ISSUED: July 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gilai; Atzmon	Holon			IL
Resnekov; Hezi	Ra'anana			IL

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Phonetic Systems Ltd.	Holon			IL	03

APPL-NO: 09/ 335456 [\[PALM\]](#)

DATE FILED: June 17, 1999

PARENT-CASE:

This application is a continuation of application Ser. No. 08/749,374, filed Nov. 20, 1996, U.S. Pat. No. 6,018,736, which is a continuation of application Ser. No. 08/317,040, filed Oct. 3, 1994, abandoned.

INT-CL: [07] [G06 F 17/21](#)

US-CL-ISSUED: 707/6; 707/532, 707/533, 707/5, 704/239, 704/240, 704/251

US-CL-CURRENT: [707/6](#); [704/239](#), [704/240](#), [704/251](#), [707/5](#), [715/532](#), [715/533](#)

FIELD-OF-SEARCH: 707/5, 707/533, 707/6, 707/532, 704/255, 704/239, 704/240, 704/251

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5131045	July 1992	Roth	704/237
<input type="checkbox"/> 5218536	June 1993	McWherter	707/533
<input type="checkbox"/> 5297039	March 1994	Kanaegami et al.	707/5

<input type="checkbox"/>	<u>5333317</u>	July 1994	Dann	707/5
<input type="checkbox"/>	<u>5418951</u>	May 1995	Damashek	707/5
<input type="checkbox"/>	<u>5457770</u>	October 1995	Miyazawa	704/255
<input type="checkbox"/>	<u>5479489</u>	December 1995	O'Brien	379/67
<input type="checkbox"/>	<u>5621857</u>	April 1997	Cole et al.	704/232
<input type="checkbox"/>	<u>5623578</u>	April 1997	Mikkilineni	704/255
<input type="checkbox"/>	<u>5638425</u>	June 1997	Meador, III et al.	379/88
<input type="checkbox"/>	<u>5873056</u>	February 1999	Liddy et al.	704/9

ART-UNIT: 217

PRIMARY-EXAMINER: Homere; Jean R.

ATTY-AGENT-FIRM: Davis; David L.

ABSTRACT:

A database accessing system for processing a request to access a database including a multiplicity of entries, each entry including at least one word, the request including a sequence of representations of possibly erroneous user inputs, the system including a similar word finder operative, for at least one interpretation of each representation, to find at least one database word which is at least similar to that interpretation, and a database entry evaluator operative, for each database word found by the similar word finder, to assign similarity values for relevant entries in the database, said values representing the degree of similarity between each database entry and the request.

7 Claims, 13 Drawing figures

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L33: Entry 7 of 7

File: USPT

Feb 3, 1998

US-PAT-NO: 5715442

DOCUMENT-IDENTIFIER: US 5715442 A

TITLE: Data unit group handling apparatus

DATE-ISSUED: February 3, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ishida; Eiji	Yokohama			JP
Matsunaga; Yoshifumi	Nakai-machi			JP
Suzuki; Toshikatsu	Nakai-machi			JP
Taniguchi; Shinichiro	Nakai-machi			JP
Ishima; Hiroyuki	Nakai-machi			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Fuji Xerox Co., Ltd.	Tokyo			JP	03

APPL-NO: 08/ 637548 [\[PALM\]](#)

DATE FILED: April 25, 1996

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	7-142697	May 17, 1995

INT-CL: [06] [G06 F 17/30](#)

US-CL-ISSUED: 395/601; 395/611, 395/612, 395/615, 395/760, 395/794

US-CL-CURRENT: [707/1](#); [704/10](#), [707/100](#), [707/101](#), [707/104.1](#), [715/532](#)

FIELD-OF-SEARCH: 395/601, 395/611, 395/612, 395/615, 395/760, 395/794

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected](#) [Search All](#) [Clear](#)

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 5388257	February 1995	Bauer	395/601

<input type="checkbox"/> <u>5418946</u>	May 1995	Mori	395/601
<input type="checkbox"/> <u>5511186</u>	April 1996	Carhart et al.	395/602
<input type="checkbox"/> <u>5522066</u>	May 1996	Lu	395/601
<input type="checkbox"/> <u>5557794</u>	September 1996	Matsunaga et al.	395/603

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
A-62-287336	December 1987	JP	
A-4-195680	July 1992	JP	

ART-UNIT: 237

PRIMARY-EXAMINER: Kulik; Paul V.

ATTY-AGENT-FIRM: Oliff & Berridge, P.L.C.

ABSTRACT:

A data unit group handling apparatus which handles a file system for storing a plurality of files defined by different kind of file formats, and at least one of the files is a data unit group which is defined by a predetermined file format, includes data units and can be located in any location in the file system. In the apparatus, at least one data unit group is retrieved from the file system in accordance with the file format, a selection instruction is received from a user to select at least one of the data unit group from the retrieved at least one data unit group, retrieval condition to retrieve at least one data unit is also received, and at least one of the data unit matching to the received retrieval condition from the at least one of the data unit group which is selected in accordance with the received selection instruction.

16 Claims, 29 Drawing figures

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Refine Search

Search Results -

Terms	Documents
L17 and L12	5

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L18

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Friday, July 29, 2005 [Printable Copy](#) [Create Case](#)

<u>Set</u> <u>Name</u> side by side	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
<i>DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>			
<u>L18</u>	L17 and l12	5	<u>L18</u>
<u>L17</u>	l16 or l15 (5051898 4688195 5101491 5371895 6169986 6154213 5323452 4910691 6233575 6199099 6112181 4868770 5212771 5331556 4656603 5068812 4953080 4864497 4965742)! [PN]	24	<u>L17</u>
<u>L16</u>	4910691 6233575 6199099 6112181 4868770 5212771 5331556 4656603 5068812 4953080 4864497 4965742)! [PN]	19	<u>L16</u>
<u>L15</u>	('20030221171' '20040205671' '6134304' '20030113017' '6647383') [PN]	5	<u>L15</u>
<u>L14</u>	('20030221171' '20040205671' '5553127' '6647383') [URPN]	16	<u>L14</u>
<u>L13</u>	L12 not l6	8	<u>L13</u>
<u>L12</u>	L11 and class\$ and categor\$ and (hierarch\$ or tree\$)	8	<u>L12</u>
<u>L11</u>	L10 and catalog\$	27	<u>L11</u>
<u>L10</u>	L2 and (dictionary).clm.	27	<u>L10</u>
<u>L9</u>	L1 and (componet\$ with class\$)	1	<u>L9</u>
<u>L8</u>	L2 and (suppl\$ with dictionary).clm.	6	<u>L8</u>

<u>L7</u>	L4 and licens\$	2	<u>L7</u>
<u>L6</u>	L4 and (level\$ same conform\$)	0	<u>L6</u>
<u>L5</u>	L4 and (level\$ with conform\$)	0	<u>L5</u>
<u>L4</u>	L3 and class\$ and categor\$ and (hierarch\$ or tree\$)	29	<u>L4</u>
<u>L3</u>	L2 and (internet or online or network\$)	73	<u>L3</u>
<u>L2</u>	L1 and catalog\$	85	<u>L2</u>
<u>L1</u>	suppl\$ with dictionary	921	<u>L1</u>

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L18: Entry 4 of 5

File: USPT

Nov 11, 2003

US-PAT-NO: 6647383

DOCUMENT-IDENTIFIER: US 6647383 B1

TITLE: System and method for providing interactive dialogue and iterative search functions to find information

DATE-ISSUED: November 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
August; Katherine G.	Matawan	NJ		
Chuang; Chin-Sheng	Holmdel	NJ		
McNerney; Michelle	Freehold	NJ		
Shriver; Elizabeth A.	Jersey City	NJ		
Hansen; Mark	Summit	NJ		
Ong; Ping-wen	Middletown	NJ		
Lee; Daniel D.	Hoboken	NJ		
Nohl; Craig	Middletown	NJ		
Sizer, II; Theodore	Little Silver	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Lucent Technologies Inc.	Murray Hill	NJ			02

APPL-NO: 09/ 654335 [PALM]

DATE FILED: September 1, 2000

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3

US-CL-CURRENT: 707/3

FIELD-OF-SEARCH: 707/2, 707/3, 707/4, 707/5, 707/6, 707/10, 707/505, 345/428, 345/966, 704/9, 705/1, 706/12

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

Clear

PAT-NO

ISSUE-DATE

PATENTEE-NAME

US-CL



5331556

July 1994

Black et al.

704/9

<input type="checkbox"/>	<u>6112181</u>	August 2000	Shear et al.	705/1
<input type="checkbox"/>	<u>6154213</u>	November 2000	Rennison et al.	345/428
<input type="checkbox"/>	<u>6169986</u>	January 2001	Bowman et al.	707/10
<input type="checkbox"/>	<u>6199099</u>	March 2001	Gershman et al.	345/966
<input type="checkbox"/>	<u>6233575</u>	May 2001	Agrawal et al.	706/12

OTHER PUBLICATIONS

Kit G. August et al., An Introduction to Future Communications Services and Access, Bell Labs Technical Journal, vol. 4, No. 2, Apr.-Jun. 1999, pp. 3-20, Published Sep. 3, 1999.

ART-UNIT: 2175

PRIMARY-EXAMINER: Mizrahi; Diane D.

ASSISTANT-EXAMINER: Mofiz; Apu M.

ABSTRACT:

A system and method for information searching comprising determination of, in fine granularity, a Community of Interest (COI), further data mining in search results, using at least one of COI and expert preferences to identify important knowledge, formulation and manipulation of results, and summarization of search results into a document like entity with dynamic attributes described. More particularly, the invention relates to a system and method for providing interactive dialogue and iterative search functions to find information on a large network of servers such as the world wide web.

20 Claims, 16 Drawing figures

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L18: Entry 5 of 5

File: USPT

Oct 17, 2000

US-PAT-NO: 6134304

DOCUMENT-IDENTIFIER: US 6134304 A

**** See image for Certificate of Correction ****

TITLE: General analysis system

DATE-ISSUED: October 17, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Norell; Lennart Bror	Alvsjo			SE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Telefonaktiebolaget LM Ericsson	Stockholm			SE	03

APPL-NO: 07/ 974165 [\[PALM\]](#)

DATE FILED: November 10, 1992

INT-CL: [07] H04 M 11/00

US-CL-ISSUED: 379/100.05; 379/106.01, 379/106.08

US-CL-CURRENT: 379/100.05; 379/106.01, 379/106.08

FIELD-OF-SEARCH: 379/201, 379/68, 379/100.05, 379/106.08, 379/106.01

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected](#) [Search ALL](#) [Clear](#)

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4656603</u>	April 1987	Dunn	
<input type="checkbox"/>	<u>4688195</u>	August 1987	Thompson et al.	
<input type="checkbox"/>	<u>4864497</u>	September 1989	Lowry et al.	
<input type="checkbox"/>	<u>4868770</u>	September 1989	Smith et al.	
<input type="checkbox"/>	<u>4910691</u>	March 1990	Skeirik	
<input type="checkbox"/>	<u>4953080</u>	August 1990	Dysart et al.	
<input type="checkbox"/>	<u>4965742</u>	October 1990	Skeirik	

<input type="checkbox"/>	<u>5051898</u>	September 1991	Wright et al.	
<input type="checkbox"/>	<u>5068812</u>	November 1991	Schaefer et al.	
<input type="checkbox"/>	<u>5101491</u>	March 1992	Katzeff	
<input type="checkbox"/>	<u>5212771</u>	May 1993	Gane et al.	395/160
<input type="checkbox"/>	<u>5323452</u>	June 1994	Dickman et al.	379/201
<input type="checkbox"/>	<u>5371895</u>	December 1994	Bristol	364/191

ART-UNIT: 276

PRIMARY-EXAMINER: Elmore; Reba I.

ATTY-AGENT-FIRM: Jenkins & Gilchrist, P.C.

ABSTRACT:

A general analysis system for performing an analysis used in the control of an industrial process. The general analysis system comprises a general analysis program for performing at least one analysis on a set of data and an analysis control data for controlling the analysis of the data set. According to the present invention, the general analysis program comprises a plurality of analysis primitives and the analysis control data comprises a plurality of analysis modules. An analysis may be constructed from a set of analysis modules and performed by interpreting this set using at least one of the analysis primitives.

52 Claims, 18 Drawing figures

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L18: Entry 1 of 5

File: PGPB

Oct 14, 2004

PGPUB-DOCUMENT-NUMBER: 20040205671

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040205671 A1

TITLE: Natural-language processing system

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sukehiro, Tatsuya	Osaka		JP	
Torigoe, Shin	Osaka		JP	
Kawakita, Yasuhiro	Osaka		JP	
Nakagawa, Satoshi	Hyoga		JP	
Matsunaga, Toshihiko	Osaka		JP	

APPL-NO: 09/ 948935 [\[PALM\]](#)

DATE FILED: September 10, 2001

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
JP	277761/00	2000JP-277761/00	September 13, 2000
JP	280178/00	2000JP-280178/00	September 14, 2000
JP	281194/00	2000JP-281194/00	September 18, 2000
JP	281256/00	2000JP-281256/00	September 18, 2000
JP	283038/00	2000JP-283038/00	September 19, 2000

INT-CL: [07] [G06 F 17/00](#)

US-CL-PUBLISHED: 715/532; 715/536

US-CL-CURRENT: [715/532](#); [715/536](#)

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

A natural-language processing system such as a machine-translation system employs a tree structure of increasingly specialized system dictionaries and attaches user dictionaries to individual system dictionaries in the tree, or helps users edit their user dictionaries by displaying lists of unknown words encountered in translations, or uploads processing programs such as translation engines to a dictionary server to make dictionary access more efficient, or combines a source document and a machine translation thereof into a single document in such a way that the reader of the translation can conveniently see the original source text,

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Search Results - Record(s) 1 through 5 of 5 returned.

☐ 1. Document ID: US 20040205671 A1

L18: Entry 1 of 5

File: PGPB

Oct 14, 2004

PGPUB-DOCUMENT-NUMBER: 20040205671

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040205671 A1

TITLE: Natural-language processing system

PUBLICATION-DATE: October 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sukehiro, Tatsuya	Osaka		JP	
Torigoe, Shin	Osaka		JP	
Kawakita, Yasuhiro	Osaka		JP	
Nakagawa, Satoshi	Hyoga		JP	
Matsunaga, Toshihiko	Osaka		JP	

US-CL-CURRENT: 715/532; 715/536

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	DOC	Draw D.
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☐ 2. Document ID: US 20030221171 A1

L18: Entry 2 of 5

File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030221171

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030221171 A1

TITLE: Data dictionary method

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Rust, Godfrey	London		GB	
Bide, Mark	Frimley Green		GB	
Lindek, Steffen	Plankstadt		DE	
Barlas, Chris	London		GB	

US-CL-CURRENT: 715/532

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	DOC	Draw D.
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☐ 3. Document ID: US 20030113017 A1

L18: Entry 3 of 5

File: PGPB

Jun 19, 2003

PGPUB-DOCUMENT-NUMBER: 20030113017

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030113017 A1

TITLE: Process for the automatic creation of a database of images accessible by semantic features

PUBLICATION-DATE: June 19, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Thomas, Corinne	Chaumont		FR	
Essafi, Hassane	Orsay		FR	

US-CL-CURRENT: 382/181; 382/173

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	DOC	Draw D.
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☐ 4. Document ID: US 6647383 B1

L18: Entry 4 of 5

File: USPT

Nov 11, 2003

US-PAT-NO: 6647383

DOCUMENT-IDENTIFIER: US 6647383 B1

TITLE: System and method for providing interactive dialogue and iterative search functions to find information

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	DOC	Draw D.
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☐ 5. Document ID: US 6134304 A

L18: Entry 5 of 5

File: USPT

Oct 17, 2000

US-PAT-NO: 6134304

DOCUMENT-IDENTIFIER: US 6134304 A

**** See image for Certificate of Correction ****

TITLE: General analysis system

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	DOC	Draw D.
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L18: Entry 4 of 5

File: USPT

Nov 11, 2003

DOCUMENT-IDENTIFIER: US 6647383 B1

TITLE: System and method for providing interactive dialogue and iterative search functions to find information

Brief Summary Text (5):

A problem with the currently available search engines is that they fail to provide effective results for many search problems. The failures fall into a number of categories including, but not limited to, 1) formulating a query, 2) adequately displaying, manipulating and navigating through results, 3) determining for what the user is actually looking, and 4) remembering how to locate the results again. From the point of view of web site owners, search engines have another set of shortcomings including, but not limited to 1) failure of metatags to provide sufficient information for an intelligent search approach, 2) failure of key words to formulate an intelligent search, and 3) the inherent requirement that web site owners maintain a large number of tags in inventory because of the ambiguity of language. Additionally, there exist some technical entities that can be improved upon in the course of a search. For example, it would be advantageous if redundant results could be eliminated, dead ends could be eliminated, and sources could be evaluated, tagged and screened. It would also be advantageous to provide search functions that correspond with known communities of users (or websites, etc.).

Brief Summary Text (7):

Web search engines do not provide user access to restructure aspects of the search from a graphical user interface. When a search is conducted and results are displayed, the decisions of the search engine are not displayed such that the user can manipulate the branches and navigate down the decision and results tree, changing the attributes and thereby finding slightly different results. The user is not provided with any information on what the extent of the results may be. The user is not afforded any opportunity to reconfigure the search or the results to display the relationship among the items returned.

Brief Summary Text (25):

Another advantage of the present invention is the determining of COI categories in fine granularity, representing COI categories and representing them differently for different COI's, representing relationships among COI categories and identifying an individual and the COI or COI's to which he or she belongs.

Detailed Description Text (25):

That is, when text is input on a form, or in a search input field, it can be sent to the search engine. If there are thousands of results, and the search server determines that the data returned are spread over a number of subjects, sources, etc., than the word or phrase typed into the input field of the search can be checked to see if it has multiple meanings, has special meanings in a dictionary of special word usage associated with a specialty or COI, or if the catalogue of expert knowledge has the word or phrase catalogued. The record in the COI or expert database could be used to select likely elements that would be of interest to the user.

Detailed Description Text (31):

Back-end 20 includes a front-end interface 28 for communicating search information

to and from front-end 18. A Smart Search engine 30 is provided that comprises functions, policies, and retrieval capability for identifying, locating and retrieving elements across a network of servers, as will be appreciated by those skilled in the art. Also provided are a DB (database) retrieval/searching component 32 for requesting DB information, a DB engine 34 for performing all physical DB retrieval and update functions, a DB administration component 36 for performing DB administration functions requested by administrator 38, a web crawler 40 which scans the internet 16 searching for information to store and index in Information Database 42, and a DB build/update component 44 that receives information from web crawler 40 and, in turn, uses DB engine 34 to build and update database 42. Other components, optionally used by Smart Search engine 30, are Lexical Dictionary 46, Expert Knowledge Database 48, Personality Profile Catalogue 50 and source profile catalogue 52. A data mining engine 54 is provided for building and maintaining information stores in relevant databases. A learning engine 56 is provided for building and maintaining the Expert Knowledge Database 48, the Personality Profile Catalogue 50 and a Display Techniques Database 58. Provisioning applications 60 are provided for provisioning users and relevant databases. A Community of Interest (COI) database 62 is provided for matching and assignment to user 12. More detailed functionality of Smart Search system 10 is provided in the following description.

Detailed Description Text (37):

With reference to FIG. 4, page-by-page GUI sequence generator 24 also includes an iterative process 130 to disambiguate words. As shown, a word or phrase is supplied from user 12 at entry point 132 or from a completed spell check operation 100 at entry point 134 and process 136 determines if the word has multiple definitions in the dictionaries 46. Process 136 will perform a standard dictionary lookup 138 to find alternate definitions 1 (140) and 2 (142). A user prompt 144 is provided to user 12 to request whether definition 1, 2, other (not specified) or other (specified) should be selected. If definition 1 or definition 2 is selected, processing continues at 146. If other (not specified) is selected, a determination is made on whether it is a new word at 148, and the system is taught about the new word at 150 before continuing. If other (specified) is selected, the search is conducted using records from searches conducted by other members of the COI at 152 as described, for example, in the Shriver and Small method described above, the patent application for which is incorporated herein by reference. Process 136 will also check, at node 154, profile catalogue 50 for a COI to which user 12 belongs. Process 156 checks the word or phrase in dictionaries and databases corresponding with selected COIs. From the results of process 156, process 158 returns alternate definition 3 for search purposes along with a database entry of known features corresponding to definition 3. Process 152 then conducts a search using alternate definition 3.

Detailed Description Text (38):

As shown in FIG. 5, page-by-page GUI sequence generator 24 further includes a process 170 for handling cases wherein a search has returned a large number of elements, or rather a number exceeding a preset threshold. Data classification engine 54, in backend 20, is invoked to analyze the data as a first step 172. This will attempt to place elements into feature clusters or groups. This process can involve accessing information about the elements derived from previous searches by all users, searches by users in the same COI, and any of the databases mentioned in this patent. A simple example might entail a broad clustering of the domains from which each element was drawn based on access patterns by members of different COI's. To minimize the amount of computation necessary per search session, the Data classification engine is expected to perform some or all of its learning functions offline.

Detailed Description Text (39):

After the Data classification engine has analyzed the data, a decision 174 is made to determine whether there is a minimal number of groups or not. If the number is minimal, processing continues at node 176 and data is displayed by display function

178. The data can be displayed as a view of all high-level data 180, or alternately, a check 182 of the user profile can be performed (in Profile Catalog 50), to determine how, at step 184, to display the data. For example, the display might comprise a table with rows and columns determined by data features. The information derived by the Data classification engine will also help inform the display process.

Detailed Description Text (40):

If the number of groups is not minimal, it can be large. If so, processing continues at node 186. A database check 188 is performed on the Source Characterization Database 52 and the Expert Knowledge Database 48, looking for the groups that are important. If a group is interesting to a single COI, processing continues at node 190, and a view function 192 shows all data with features preferred by the COI based on references to Profile Catalogue 50, Source Characterization Database 52, and Knowledge Database 48.

Detailed Description Text (48):

Guide to experts--The user interface provides a means to pull up a listing of members of each Community of Interest. Users identify when they want their identity to remain secured. Otherwise, members of the user group can seek the names of people or organizations having the same interests or expertise they need. The Personality Profile Catalogue 50 is used to create the listing of experts and interested persons.

Detailed Description Text (51):

Data display function--The data display application uses the Personality Profile Catalogue 50 to identify the user's COI. There is a corresponding generic profile of Display types in the Display Techniques Database 58. These profiles of display techniques are available to be used when little is known about the preferences of the user. If the user is continually presented with a type of display and chooses another one from the toolbar into which the resulting elements may be transferred, then the profile is updated to reflect the preference. As the population of users in the same COI continue to use the display functions, the system will learn more about the group as a population and will ultimately learn how to create a better Display Techniques Database entry for that COI. There may be refined differentiation among user groups observed in this manner and the databases will ultimately contain many more finely differentiated databases of Personality Profiles and Display Technique preferences.

Detailed Description Text (53):

"Tell me more about this" function--Once search results have been returned, the application has more data about the search and its resulting elements. It knows what the sources are, etc. The user may wish to learn more about things the way they can in the library. Once a person gets to a bookshelf or magazine rack in a library, many items related to the original search are present. These items may not have been explicitly listed in the search results but they are of potential interest to the user. The graphical user interface permits the user to continue a search by selecting one branch of the search and continuing in a more refined manner into the data that are related to the original search. Convenient methods of performing this function include using the Source Characterization Database 52 to categorize the results and preferably provide a link to results titled "Would you like more magazine articles about pedigreed cats?" The user could then access the information if desired. The Community of Interest is also used to prioritize the questions asked of the user. The Expert Knowledge Database 48 maintains and updates the query formulation function.

Detailed Description Text (56):

Community of Interest database 62 contains provisioned and learned information about COIs. It contains histories of searches conducted by members of COIs. Provisioned data includes pre-populated information including catalogues of known

professions, hobbies, demographic groups, etc. It contains references to lexical dictionaries, sources preferred, user profiles, display techniques, etc. It also contains references to Source Characterization Databases.

Detailed Description Text (58):

To effectively provide service to new users, and those identified for the first time with a COI, a pre-populated global description can be used. Library lists and Indexes of Job Classifications may be used to begin the database. This will assist in filling in the spaces of COI's. Looking at the sources available online and the descriptions of the target audiences will also provide a piece of the COI database.

Detailed Description Text (59):

Once users of the system collect around each COI, the basic database representations may be modified to reflect the measurable requirements of the actual members of the group. The database will contain job categories, population categories, demographic information, population segmentations, memberships of known organizations and groups, hobbies and interests categories, etc.

Detailed Description Text (64):

Personality Profile Catalogue

Detailed Description Text (65):

With reference back to FIG. 1, Personality Profile Catalogue 50, besides containing profiles unique to individuals, contains personality profiles for celebrities and generic profiles for miscellaneous use or, perhaps, for use as templates for defining initial individual profiles. It should be noted that Personality Profile Catalogue 50 and other databases are not limited to the above-mentioned exemplary personality profiles.

Detailed Description Text (66):

Creating a COI profile in profile catalogue 50 for a user with or without registration by user would be done by: assessing technical papers, web site, email, subscriptions (including source characteristics), mail lists to and from, items forwarded, organization charts, directory entries, query entries of the individual user 12 to determine special interests and clustering of features in the elements identified (a selection of these and other items can be assessed depending on access provided through group service arrangement, or individual subscription); borrowing a personality from a generic group similar to the individual then making changes as more information becomes available; assessing selected items in search results relating to an area of interest to determine characteristics and associating them with the user's profile; determining an age or social context of the individual; determining groups and individuals associated with the individual by reviewing email, technical papers, telephone and email address book, post, articles containing individual's name or member of group, etc.; determining an individual user's relationship to the group: casual, involved, etc.; recording multiple COI's of the individual using the system; determining attributes relating to understanding and use of language including but not limited to: primary language used, other languages used, competence and performance in each; and, determining attributes of language for each COI including but not limited to: access to vocabulary of each specialty, estimated sophistication in subject or area of interest, facility with vocabulary in specialty (competence and performance).

Detailed Description Text (67):

In addition, preferably there exists a database of catalogues of sources used in research, in a library, for market research, etc. The items in the catalogues, (books, journals, etc.) have known target audiences, and actual audiences. The audiences can change over time, and that is something we can observe by looking at the users selections online and updating the database. Over time there will be more fine granularity in the specialization of the sources. (Perhaps because online,

magazines and journals may not be tracked in their entirety, but may be counted by the individual articles, ads, etc.) There are temporal facts about elements, people, etc. that will make one item more desirable than another. For example, a research cardiologist might only be interested in items that are published within the past two years. When looking for a conference, he or she is only interested in conference listings that are recent, and that will occur at least one month in the future (for planning purposes). A student 8.sup.th grader may not be that sensitive to the calendar items. There is a different calendar that's important to a student. School year, holidays, time of day, etc. There may be some reason to select information or display information based upon the calendar people live by.

Detailed Description Text (68):

As such, creating a proxy profile in profile catalogue 50 for a COI would be done by: identifying sources that fit the COI (an additional tier of sources should exist to provide flexibility); and, identifying a calendar for relevant items that best fits the COI (a secondary calendar should exist).

Detailed Description Text (69):

FIG. 10 provides a flow chart of a Profile Provisioning for Search Function 280. A test 282 is first performed to determine if the user is known. In case test 282 returns a yes answer, yes path 284 is invoked where test 286 determines how the user is known. Possible answers to test 286 are, for example, a company database, a social group/organization database, public database/directory, school government database, found online (email, web site, document, papers, etc.), other private, other public, and has profile. Once it is determined how the user is known, processing continues at node 288 to populate profile catalogue 50.

Detailed Description Text (70):

Returning to test 282, if a no answer is returned, no path 290 is invoked where function 292 offers the user the following profile options: provide profile information, select a generic profile, select a celebrity profile, or bypass the profile option. If any choice other than the bypass option is returned by the user at 294, processing continues at node 288 to populate profile catalogue 50. Bypass path 296 is invoked if the user chooses to bypass the profile option, where collection function 298 gathers keyboard/user interface entries and items selected from a results listing. Compare function 300 compares the items gathered by the previous collection function with known COIs. Select function 302 then selects the closest COI for addition to profile catalogue 50.

Detailed Description Text (71):

Once it is determined that Personality Profile Catalogue 50 needs to be populated or updated from the above-described procedures, the task is reduced to determining what to put into Personality Profile Catalogue 50. FIG. 11 shows a flow chart for a portion of process 310 to make this determination, and this determination is made depending on the source of information. Process 312 handles the case where the source is a social group/organization database.

Detailed Description Text (72):

Catalogue function 314 catalogues the social group, relationships and organization into profile database 50. Identify function 316 identifies the COI of the group including subcategories for populating profile database 50. Scan function 318 scans documents, web sites, etc. for words and terms to populate profile database 50. Scan function 320 scans email for subjects, senders, etc. to populate profile database 50. Scan function 322 scans and processes text files to create a group profile. It creates a lexicon of terms used by the group or correlates the lexicon from known sources such as organization/subject dictionaries. Create function 324 creates a geographic representation of the organization/group, locations of people, etc. to populate profile database 50.

Detailed Description Text (73):

FIG. 12 shows a flow chart for process 330 which handles the case where the source is found online based on the user's ID or name. Decision function 332 determines whether the source is a personal web site, directory, document, etc. If the source is a personal web site, scan function 334 scans the web site for clusters of terms used. Correlation function 336 correlates the clusters with one or more COIs. Matching function 338 chooses the best fit COIs, and populate function 340 populates profile catalogue 50 with a template of that COI or COIs. If decision function 332 determines that the source is an online directory, scan function 342 scans the directory for features, geography, organization charts, etc. Select function 344 selects a path to a generic profile with identifying data and geography or communication, if known. If decision function 332 determines that the source is an online document, scan function 346 scans the document and determines if an author is known. If an author is known, path 348 is traversed, and weight function 350 weighs the document high because the author is known. Check function 352 attempts to determine the publisher source, and matching function 354 determines a best fit COI. If the author is unknown, however, content match function 356 is invoked, and check function 358 searches for word clusters of interest.

Detailed Description Text (76):

FIG. 15 shows a flow chart for the final process 380, of determination process 310, which handles the case where the source is a company database. Function 382 references organization charts, relationships and departments. Function 384 determines a job title, and if a COI matches the title directly, populates profile catalogue 50 with the COI. Function 386 references the job description, and performs cross-referencing of intelligent databases, and catalogues information if necessary for populating profile catalogue 50. Function 388 references any referenced web sites and scans those web sites for clustering categories and clusters of text contents for determining COIs. Function 390 references emails and handles these with appropriate scanning functions, scanning for content, senders information and subjects. Function 392 references documents databases and scans for features and clusters within those databases. Function 394 references communications links such as, for example, email, phone, fax, to determine features and clusters for correlating to COIs. And finally, function 396 references geographic locations for home, office, etc. for populating profile catalogue 50.

Detailed Description Text (78):

Source Characterization Database 52 contains catalogues of sources, target audiences, demographics, publishers, useful features, cross references, COI references, provisioned and learned, market research, dates, frequencies of updates and types of source (electronic, broadcast, video, personal web site, etc.).

Detailed Description Text (79):

Creating a proxy source catalogue in characteristics catalogue 52 would be done by: identifying known subject matter sources including but not limited to journals, newspapers, magazines, web sites, brick and mortar sources, paper published sources, etc.; and, populating the catalogue 52 with descriptions, links, profile of language, type of data available in each source, availability online.

Detailed Description Text (80):

Thus, resources on the network of networks can be catalogued by labeling each known resource (journals, periodicals, publications, organizational publications, professional publications, newspapers, personal sites, business sites, catalogues, library resources, market research, etc.), identifying COI's interested in each known resource, correlating vocabulary used in known resources with COI, and periodically checking the vocabulary and update it with new buzz words, jargon, etc.

Detailed Description Text (93):

The personality profile catalogue or database 50, as noted above, is a database

that can identify characteristics of the user that will assist in formulating a query, determining which items in a list the user may be interested in, selecting a display technique, determining which sources to prioritize, etc. Problems faced in using the strategy of COI for search include being able to identify the COI of the user without collecting specific information from the user. The system can store a series of default profiles, then observe user behavior, query user preferences, and modify the profile for future searches.

Detailed Description Text (101):

Writing style in the sources selected by user 12 or by an expert will be used to identify characteristics of the COI. These characteristics will be catalogued by Smart Search system 10. Writing style of the user 12 will be characterized and stored in a personality profile 50 database.

Detailed Description Text (103):

Search results sources will be catalogued to identify characteristics of the sources including but not limited to: dates and frequency, COI, COI's, general level, degree and level of jargon, categories of resources (calendars of events, classified, technology reviews, etc.) and will be used to inform user about sources. The source characteristics catalogue 52 will record whether the source is a primary source, secondary source, web site, commercial publication, technical, business, fiction, or other type of source. Experts will annotate the source. Source participants can add information to the record about the source.

Detailed Description Text (104):

One method of presenting results is to list categories in a series of nested menu windows based upon the data returned and how it clusters in categories, and metacategories. Category names can be derived from the data and then recorded for future use by the Smart Search system 10 application. Categories can also be derived from the data with the supervision of an expert resource person, or subject matter expert. Category differentiation is based upon fine-grained understanding and differentiation among terms, phrases, reserved words, jargon, technical terms, sources selected, and resulting elements.

Detailed Description Text (105):

The complete results presentation will contain representations of each distinct concept represented in the results and not constrained by COI, and a reference to each data point in each concept representation. Since many elements in a search result list belong to more than one category or abstract concept, the relationship among categories will be presented.

Detailed Description Text (107):

When sources are identified by the Smart Search system 10 application, annotation from the cataloguing process will be made available. The annotation will inform the user 12 about the source and about who created it and who (COI) uses the source. This information may be provided by the source owner, an expert, or automatically determined. For certain applications Smart Search system 10 will also link to the main information center for the source identified.

Detailed Description Text (115):

Another means for altering the direction of the search application is to add clarification by looking at the data represented in the results. By selecting other features of the data to display relationships not clearly illustrated in the first display of the data, a search result may reveal new information to the user. The results data is representing the view from a particular point of view or COI. The user is not limited to this presentation of the data. Other features identified in the search are available and may be selected from a window, or by another means of manipulating the data of the results. A helpful device would be a window that lists all the recognized significant data relationships in the search results. For example, if 20% of the search results were from technical journals, and 15% of the

search results were from items dating within the past ten years, those facts would be listed in the window for the user to see. The data itself reveals this information, using the database stored in the search application server to verify sources, publication dates, subjects and relevance, etc. Attributes about the users of the source are also relevant to the COI. If a description of the users of a source is made available, then the COI can be matched more directly with the targeted market of the sources. Even if the results are displayed by categories assumed to be important to the COI, there may be a feature in the data that is of interest to the user and is not graphically represented. By using a method such as the window mentioned above, a user may identify a feature that is of interest, and request that the display be modified to illustrate that feature.

Detailed Description Text (116):

Example: Theater Directions Magazine Monthly 20,000 Circulation US Published in English Specialized periodical for Theater professionals Ages of readers Demographics of readers Additional information about readers 35 Articles monthly Information about Authors 200 Advertisers Information about advertisers Personals Classifieds Etc.

Detailed Description Text (118):

Search Application: Prefers Theater Directions Magazine as a source for search conducted by a member of the Thespian COI. A search may result in a listing of results spanning 3 major unrelated COI's. For example, a search on Home Networking may result in thousands of items in a list spanning many pages of titles. When looking at the results, they may fall into the categories of: home communications network architectures including such subjects as computer LAN's, etc., home health aides visiting the ill or elderly, and home school programs using a network of teachers and other resources. By using the strategy associated with Communities of Interest, the system would identify which major subject area was related to a particular COI through: knowledge of the sources of materials, subject handled by the source, types of authors, types of content, disambiguating words used for the search and filtering for features related to the COI, etc. Without specific knowledge of the COI, the total of the search results would be segregated based upon strata and subject as defined in the global COI database. The results would then be displayed showing the features that differentiate them, in this case being home electronics/communications, social work, education, and other.

Detailed Description Text (121):

Humans are particularly good at identifying patterns in data when the data is presented in an appropriate graphical form. The key is to identify reasonable graphical representations for abstract data elements. It is another object of the present invention to identify subject matter and object classifications that will be modeled graphically so search results may be presented to the user 12. An example for representing solutions graphically would involve using a metaphor for placing pushpins representing search returned objects at a high level and with relationships described graphically (between the returned objects). Color can be used to indicate proximity characteristics. Sound can be used to illustrate relationships among items, and to represent navigational distances between objects. Sounds can enhance an application so audio-based interfaces may be used in addition to graphical. For example, a search might be conducted using a cell phone, and the user 12 will listen to results receiving audio cues to help formulate relationships among returned items. For example, suppose a consumer is searching for a particular car. The consumer knows some attributes relating to the car, such as the manufacturer and the year. The Smart Search will enable the consumer user 12 to use a configuration management approach to filling in a form through which the search will be formulated. The assumption here is that the consumer's shopping interests can vary along a continuum from a very directed search through to a rather unconstrained browsing type of search. An important issue relating to these dimensions of searching is the ability for a search engine to have varying degrees of information presented during the query and still return useful, targeted, and

understandable results.

CLAIMS:

2. The method as set forth in claim 1 further comprising: representing interest categories and representing each differently for different interests; representing relationships among the categories; and, identifying an individual and the interest categories to which he or she belongs.

4. The method as set forth in claim 1 further comprising creating, updating and accessing personality profile records in a personality profile catalogue.

10. The method as set forth in claim 1 further comprising iterating using configurable query techniques, using a lexical dictionary for disambiguation of query text.

12. The system as set forth in claim 11 further comprising at least one database for storing information representing interest categories, representing relationships among the categories and identifying an individual and the interest categories to which he or she belongs.

14. The system as set forth in claim 11 further comprising a personality profile catalogue.

17. The system as set forth in claim 11 further comprising a Community of Interest Database for storing the interest categories.

20. The system as set forth in claim 11 wherein the interface facilitates communication of configurable query techniques, using a lexical dictionary for disambiguation of query text.

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L7: Entry 1 of 2

File: PGPB

Oct 7, 2004

PGPUB-DOCUMENT-NUMBER: 20040196307

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TITLE: System and method for managing content on a network interface

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INVENTOR-INFORMATION:

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US-CL-CURRENT: 715/133; 709/223 ✓

ABSTRACT:

The disclosed invention is a system and method (collectively the "system") for the automated management of content on a network interface. The network interface can be a web site on the World Wide Web, an Internet location, an intranet location, an extranet location, or some other form of network interface (collectively "web site"). The system can automatically create applications and links to those applications without human intervention. Examples of automated applications include newsroom applications, calendar of events, employment opportunities, project portfolio, biographies, frequently asked questions, document library, category management, product catalogs, e-mail broadcasts, surveys, and newsletters. Fully normalized hierarchies of business rules and user profiles can be supported by the system to facilitate automation and configurability. Multiple content providers can manage a single web site in a simultaneous or substantially simultaneous manner. In ASP embodiments, multiple organizations can use the system to manage multiple web sites in a substantially simultaneous manner.

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Generate Collection

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L13: Entry 2 of 8

File: PGPB

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REPRESENTATIVE-FIGURES: 5

ABSTRACT:

A method for creating a rights data dictionary for definition of terms of a rights expression language is disclosed. The data dictionary may be used in computer operations on rights expression metadata, such as for digital rights management applications. The data dictionary may also be used for translating between expressions in different rights expression languages, thereby enabling interoperability of rights expressions. The rights data dictionary is organized according to a hierarchical schema. Terms are added to the data dictionary according to specified rules that relate to a basic term set, and in particular, are begotten from act type terms. The schema includes a "context" term of the basic term set that is assigned a meaning signifying a circumstance in which at least the basic action occurs. Other terms may be developed from the context term and defined by their relationship to it.

CROSS-REFERENCE TO RELATED APPLICATION